

7187



335367

SF FILE NUMBER

FILE PLAN

2.0

MEMORANDUM

TO: Mike Zimmerman, OSC
EPA/ERB - Denver

FROM: Robert Eddy
TAT - Region VIII

DATE: March 28, 1991

SUBJECT: Trip Report and Analytical Results of the Ground Water
Sampling of 3 Wells at Richardson Flats Tailings, Summit
County, Utah; TDD #T08-9101-025; PAN #EUT0039SAA

INTRODUCTION

This report has been prepared in fulfillment of the requirements of TDD #T08-9101-025. The Ecology and Environment, Inc., Technical Assistance Team (E & E TAT) was tasked by the Region VIII U.S. Environmental Protection Agency Emergency Response Branch (EPA/ERB) to provide metals analysis of four residential wells in the area of Richardson Flats which is located about one mile east of Prospector Square in Park City, Utah.

The sampling effort occurred on March 7, 1991, beginning at approximately 1000 hours. Personnel in attendance included Mike Zimmerman, OSC (EPA/ERB), Bob O'Brien, Utah Department of Health (UDOH), Robert Swenson, Summit County Health Department Sanitation, and Robert Eddy, Region VIII TAT. All sampling was conducted by Robert Eddy of the TAT assisted by Robert O'Brien of UDOH.

The original scope of the project was designed to collect samples of unpurged water from residential wells down gradient of the tailings to determine whether or not a release of metals had occurred or was occurring to the ground water in this location. Another suite of samples was scheduled to be collected after at least 3 casing volumes had been purged from each well. The analysis requested QA-II level objectives.

In actuality samples were collected from 3 downgradient industrial wells located northeast of State Highway 40 and directly north of the Richardson Flats Tailings because there no residential wells within a mile downgradient of the site. The wells sampled were all in excess of 300 feet in depth and used primarily for industrial purposes. During

this sampling effort the TAT also collected other information pertinent to the preparation of this report. At each location water temperature, pH, and conductivity was obtained, along with a description of the location, purge volumes, and the time at which each sample was collected. One duplicate, a triplicate (for spiking purposes), and a rinsate blank were also collected for QA/QC purposes. See Table 2 for further details concerning sample tag numbers, bottle lot numbers and chains-of-custody.

All samples were shipped on the same day using chain-of-custody procedures as specified in the Technical Assistance Team Standard Operating Procedures (TAT SOP) for Sampling. These samples were shipped to Silver Valley Labs in Kellogg, Idaho, for next day delivery under Federal Express Airbill #8750936821.

2.0 SITE DESCRIPTION

The Richardson Flats Tailings site lies within the northwest quarter of Section 1 and the northeast quarter of Section 2, Township 2 South, Range 4 East, Salt Lake Meridian, in Summit County, Utah. The tailings cover an area of approximately 160 acres on a topographic depression located one and one half miles northeast of the town of Park City.

The mill tailings at Richardson Flats were produced from mining operations conducted at the Keetley Ontario Mine and other metal mining operations currently owned by United Park City Mines (UPCM). The area was last used for tailings disposal from 1975 to 1981. In May 1974, the UDOH - Water Pollution Committee approved plans by Park City Ventures (who had leased the properties from UPCM) to construct an embankment, dikes and a diversion ditch to contain mill tailings disposed on Richardson Flats.

The E&E TAT has not performed any work at this site prior to this sampling effort.

3.0 SAMPLING PROCEDURES

Sampling activities consisted of one day of ground water sampling conducted at three locations approximately one half mile north of the Richardson Flats Tailings site.

Due to the nature of the wells sampled and the lack of specific information, certain pertinent data (i.e. well depth, casing diameter, height of the water column, pumping level, and total depth of the wells) the TAT was unable to adhere to ground water sampling protocols by calculating exact purge volumes. In order to assure some adherence to the protocols specified in the Region VIII TAT SOP for sampling the TAT assumed that each borehole was ten inches and each water column was 100 feet in height.

All water samples were screened using an HNu. During the purging of each well measurement of pH, conductivity, and temperature were recorded.

All samples were collected directly into the prescribed 1 liter poly containers obtained from the US EPA bottle repository and the bottle lot numbers were recorded in the site logbook. All filtered samples were then filtered later on completion of all the sampling activities using a Geotech peristaltic geopump with disposable 0.45 micron filters which eliminated the requirement for decontamination of sampling equipment after each sample had been filtered.

The first sample RF-MW-1, was collected at the Utah Power and Light facility at Silver Creek Junction. No data on the depth of this well or the height of its water column was available. Four types of samples were collected at this location: 1) unpurged filtered, 2) unpurged unfiltered, 3) purged unfiltered and 4) a purged filtered. Samples were immediately put into a cooler containing ice and cooled to 4°C. The unpurged samples were collected after allowing the tap to run for about 5 minutes, since the TAT was unable to determine the amount of piping between the well-head and the faucet. The tap was allowed for a total of 19.5 minutes before the purged samples were collected.

The second sample, RF-DW-2 was collected from the Geneva Rock aggregate plant, which is located about 150 yards northeast of the Utah Power and Light facility. After a conversation with the plant supervisor, the TAT was able to calculate a purge volume of 3298 gallons would be necessary to comply with the 3 casing volume requirement. However, in order to activate the pump to obtain fresh well water it was necessary to remove about 5000 gallons from the holding tank. The well was then purged and the sample collected. This was the only site where the sample was actually collected at the wellhead. A duplicate sample, RF-MW-5, was also collected at this location for QA/QC purposes.

RF-MW-3 was obtained from the Monroc facility located just south of the Geneva Rock plant. Special measures had to be taken at this site since there was no opportunity to collect the sample at the wellhead. In order to obtain a sample from the well, the TAT member had to climb atop the facility water storage tank and rig the float system to activate the pump. Due to the cramped nature of this operation and the fact that there was nowhere to allow the purge water to flow to, the OSC opted not to collect purged samples.

The samples were shipped via Federal Express next day on the afternoon of March 7, 1991, to Silver Valley Lab in Kellogg, Idaho.

4.0 FIELD OBSERVATIONS

As previously mentioned, problems encountered included the following:

- No specific details on well construction were available. Thus the TAT member on site asked that pumps be allowed to run for approximately 20

minutes or in the case of Geneva Rock until 3,298 gallons had been purged before collecting the purged samples.

- The wells sampled were in constant use so that the water in the casing/borehole could not be considered truly unpurged or standing water.
- One sample (purged, filtered) RF-DW-2 was not collected at Geneva Rock due to a lack of water in the borehole.
- Site observations of the ground were not noted because of an overnight snow fall.
- None of the samples were collected at the actual wellhead because of the in-place plumbing.
- None of the wells were used as potable water supplies. All three wells were used strictly for industrial purposes.

5.0 DISCUSSION OF ANALYTICAL RESULTS

A total of 14 samples from 3 wells were taken on March 7, 1991. Based upon the results obtained from the lab, no arsenic was detected suspended or dissolved in the water samples from any of the three wells. The same statement applies for cadmium and chromium. However, the results for lead indicate concentrations of 36 ppb (parts per billion) and 5.20 ppb in samples taken from RF-DW-5 and its duplicate RF-DW-2, respectively. These results are unusual for two reasons: 1) RF-DW-5 is a duplicate of RF-DW-2 and 2) the sample with higher lead concentration (RF-DW-5) does not correspond with the same unpurged and unfiltered sample from RF-DW-2. Since RF-DW-5 was taken as a lab QA/QC check, it may be assumed that there were problems duplicating the results.

TABLE 1
RICHARDSON FLATS
TDD #T08-9101-025

<u>Sample #</u>	<u>Sample Tag Number</u>	<u>Bottle Number</u>	<u>Chain of Custody Number</u>
RF-DW-1			
Unpurged unfiltered	8-20080	0068043	8-13227
Unpurged filtered	8-20082	0068043	8-13227
Purged unfiltered	8-20079	0068043	8-13227
Purged filtered	8-20081	0068043	8-13227
RF-DW-2			
Unpurged unfiltered	8-20083	0068043	8-13227
Purged unfiltered	8-20084	0068043	8-13227
Purged filtered	8-20086	0068043	8-13227
RF-DW-4 (Triplicate)			
Unpurged unfiltered	8-20091	0068043	8-13227
	8-20095	0068043	8-13227
	8-20096	0068043	8-13227
Unpurged filtered	8-20093	0068043	8-13227
RF-DW-5 (Duplicate of RF-DW-2)			
Unpurged unfiltered	8-18998	0068043	8-13227
Unpurged filtered	8-18980	0068043	8-13227
Purged unfiltered	8-18979	0068043	8-13227
Purged filtered	8-18981	0068043	8-13227
RF-BL-1			
Unpurged filtered	8-20087	0068043	8-13226

APPENDIX A

Analytical Data



ecology and environment, inc.

1776 SOUTH JACKSON STREET, DENVER, COLORADO 80210, TEL. 303-757-4984

International Specialists in the Environment

MEMORANDUM

TO: Mike Zimmerman, OSC
EPA/ERB - Denver

FROM: Kent Alexander *KA*
TAT - Region VIII

DATE: March 20, 1991

SUBJECT: Data Results for Richardson Flats; TDD #T08-9102-001

This memorandum was written to satisfy the requirements of Technical Direction Document (TDD) #T08-9102-001 issued to the Ecology and Environment, Inc., Technical Assistance Team by the Region VIII Environmental Protection Agency Emergency Response Branch (EPA/ERB).

Please find attached the data results from the water sampling at the Richardson Flats site in Park City, Utah. The results have not received a QA/QC review. If you would like a review to be performed, please let me know so that it will receive a priority assignment.

The results may be found in the attached table or in the raw data at the end. Samples RF-DW-2 and RF-DW-5 are field duplicates. A blank sample was also taken.

The following qualifiers were attached to the sample results by the laboratory:

- B - The sample result was above the IDL but below the CRDL.
- U - The element was analyzed for but not detected.
- W - The furnace post digestion spike was out of range.

TABLE 1
INORGANIC SAMPLE RESULTS (ug/L)
RICHARDSON FLATS
TDD #T08-9102-001

Sample Location	RF-DW-1	RF-DW-1	RF-DW-1	RF-DW-1	RF-DW-2	RF-DW-2	RF-DW-2
Sample Tag #	8-20079	8-20080	8-20081	8-20082	8-20083	8-20084	8-20086
Lab ID #	WA6954	WA6955	WA6956	WA6957	WA6958	WA6959	WA6960
Date	03/07/91	03/07/91	03/07/91	03/07/91	03/07/91	03/07/91	03/07/91
Time	1039	1039	1039	1039	1200	1200	1200
Purged	Yes	No	Yes	No	No	Yes	Yes
Filtered	No	No	Yes	Yes	No	No	Yes
Arsenic	3.00 UW	3.00 UW	3.00 UW	3.00 UW	3.00 UW	3.00 UW	3.00 UW
Cadmium	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U
Chromium	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Lead	5.90	1.00 B	1.00 U	1.00 U	1.10 B	5.20	1.00 UW
Sample Location	RF-DW-4	RF-DW-4	RF-DW-5	RF-DW-5	RF-DW-5	RF-DW-5	RF-BL-1
Sample Tag #	8-20091	8-20093	8-18978	8-18979	8-18980	8-18981	8-20087
Lab ID #	WA6962	WA6963	WA6950	WA6951	WA6952	WA6953	WA6961
Date	03/07/91	03/07/91	03/07/91	03/07/91	03/07/91	03/07/91	03/07/91
Time	1224	1224	1300	1300	1300	1300	1420
Purged	No	No	No	Yes	No	Yes	No
Filtered	No	Yes	No	No	Yes	Yes	No
Arsenic	4.80 B	3.00 U	3.80 B	3.00 UW	3.00 UW	3.00 UW	3.00 U
Cadmium	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U
Chromium	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Lead	1.00 U	1.60 B	36.9	1.40 B	1.90 B	2.80 B	1.00 U

1
INCIDENTAL ANALYSIS DATA SHEET

Lab Name: SILVER VALLEY LASE., INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: JOB154

Matrix (soil/water): WATER

Lab Sample ID: WA6950

Level (low/med):

Date Received: 3/08/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.80	B		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.00	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	36.90			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

CLIENT # 8-48978

1
INORGANIC ANALYSIS DATA SHEET

Lab Name: SILVER VALLEY LABS., INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: JOB154

Matrix (soil/water): WATER Lab Sample ID: WA6952

Level (low/med): Date Received: 3/08/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.00	U	W	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.00	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	1.90	B		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

CLIENT # 8-18980.

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12

Lab Name: SILVER VALLEY LABS., INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: JOB154

Matrix (soil/water): WATER Lab Sample ID: WA6954

Level (low/med): Date Received: 3/08/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.00	U	W	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.00	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	5.90			F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

CLIENT # 8-20079.

SAMPLE NO. 14

INORGANIC ANALYSIS DATA SHEET

Lab Name: SILVER VALLEY LABS., INC. Contract:

Lab Code: Case No.: SAS No.: SDS No.: JOB154

Matrix (soil/water): WATER

Lab Sample ID: WA6956

Level (low/med):

Date Received: 3/08/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.00	U	W	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.00	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	1.00	U		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

CLIENT # 8-20081.

1
INORGANIC ANALYSIS DATA SHEET

Lab Name: SILVER VALLEY LABS., INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: JOB154

Matrix (soil/water): WATER

Lab Sample ID: WA6958

Level (low/med):

Date Received: 3/08/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.00	U	W	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.00	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	1.10	B		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

CLIENT # 8-20083.

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

Lab Name: SILVER VALLEY LABS., INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: JOB154

Matrix (soil/water): WATER Lab Sample ID: WA6960

Level (low/med): Date Received: 3/08/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	3.00	U	W	F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.00	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	1.00	U	W	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

CLIENT # 8-20086.

INORGANIC ANALYSIS DATA SHEET

Lab Name: SILVER VALLEY LABS., INC. Contract:

Lab Code: Case No.: SAS No.: SDS No.: JOB154

Matrix (soil/water): WATER

Lab Sample ID: WA6962

Level (low/med):

Date Received: 3/08/91

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	4.80	B		F
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.00	U		P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	1.00	U		F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS

Clarity Before: CLEAR

Texture:

Color After: COLORLESS

Clarity After: CLEAR

Artifacts:

Comments:

CLIENT # 8-20091.

APPENDIX B

Logbook

TABLE OF CONTENTS

Date Log Open: 01/28/91

TDD #:

108-9101-025

PAH:

EUT 0039 SAA

Site Name:

RICHARDSON FLATS

Site Location:

Investigator:

ROBERT EDDY

EPA Point of Contact:

DIXIE ZIMMERMAN

General Notes:

SAMPLE 5 HOUSES FOR METALS
ANALYSIS ON WATER

Special Notes:

Team Members:

ROBERT EDDY, LINDA WARRICK

TDD Deadlines:

02/12/91

Toss 9101-025

Spoke w/ Mike Kinnaman about a schedule for sampling Richardson flats. He wanted to know when the TAT could accomplish this.

Test. I suggested the week of the 25th of Feb.

or late this week. He says no because

he would have to check with the state of the

(Bob O'Brien) and on the 28th due to

the lack of personnel at GEB he couldn't

then. We decided to try for the week of

the 7th March - 1991.

RE

02/13/91

108-9101 - 095

1358 Spoke w/ Mike Zimmerman about sample by Richardson
 f/als on ~~the~~ March 7, 1991. He says that
 date has been confirmed w/ the state

and county health

-TAT should provide sample bottles for
 the state (all parameters)

- Meet 1000 hours at Celeville, probably
 if residences. To sample, along with

a duplicate.

1405 1 Told Jan Smith about this schedule

K2

02/15/91

Tot - 9001 - 025.

Richardson

1402 Spoke w/ Kent Alexander to ensure that

that

the lab could deliver analytical results
by ~~that~~^{on} time since we would have only
24 days until the report was due. 11

for

1405 Kent checked the requirements this is for
a five-day turnaround

basely
with

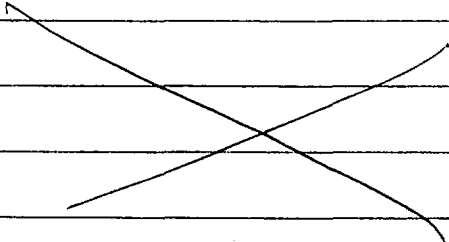
03/01/91

TOS-9101-025

0842 Called Mike Zimmerman about the exact number of containers requested since his letter to the County Health sanitarian mentioned collecting purged and unpurged samples from the domestic wells which would double the number of containers. Mike said he realized this and to check with Kent Alexander on whether or not there was enough money budgeted for analytical services.

1100 Called the OSC (M2) to find out whether he still wanted TAT to provide sample containers to the State. He said he would call me back w/ the answer.

1315 Returned Mike Zimmerman call. He said that the State would provide their own containers. The OSC would be out of town until he flies into Salt Lake on Wednesday afternoon but he will contact me on Monday afternoon of Tuesday morning.



RE

03/06/91

T08-9101 - 025

IT number 1842 Called Kent Alexander in Denver about whether
 to preserve saplings with Hildis. He
 says yes, preserve all saplings.
 from 2220 looked on preparing paper work 1.5 hours

able
 he
 sent
 had
 advised
 whether
 he
 would
 that the
 insects
 he
 otherwise
 otherwise

R.E.

03/01/91

TOS-9107-025

0958 Arrive at Truck Stop off I-80 to meet w/ Robert
Swenson Summit County Health Sanitarian. 10

1002 Arrive at Quinn Junction Utah Power and Light
facility to collect a water sample from fire
hydrant in the garage area RF-DW-1 1

1012 Calibrated instruments

Cond: 380 w/ 400 μ mole coli EPA # 647615
2500 w/ 3750 " Sol.

1039 Sample collected at DW-1

1107 Proceeded to Geneva Rock Plant (^{RE} ~~MAJOR~~) to sample
the well onsite which is not used for domestic
purposes. Pugged volume would require 9085 gal by
to be removed before it can be cased 1.
Time aquifer water 1.

1200 Approximately 4000 gallons pugged from the well 14.
Geneva Rock facility sample was then collected
for pugged volume equates to 1 1/2 times the casing 17
volume.

1224 Sampled the well at Monroe for triplicate of 1830
unfiltered & pugged, no pugged sample collected because
of closed system that would require the
removal of 10,000 gallons of water.

RE

T08-9101-025

1245 TATM Juddy accompanied by the OSC
 and Bob O'Brien (UDOH) proceed south
 to the actual tailings site.
 1302 The area around the actual tailings
 is wet from the overnight snows. The
 fencing around the site is in a
 *leaky state of extreme disrepair near
 the road and especially near the bridge
 over what I assume to be Silver
 Creek. TAT took photographs of the
 place.
 1325 Stopped in Port City to buy lunch.
 1402 Arrived back at UDOH and dropped
 off OSC and Bob O'Brien.
 1435 Returned to Petrochen site to field and
 prepare samples taken at Richardson Flats.
 1715 Completed preparation and packaging of samples
 to be delivered to the lab.
 1830 Returned to Petrochen after shipping samples
 via Fed Ex and turning in the vehicle

Lab Assignment:

10-15 water samples

incl. 1 dup

1 blank

As, Pb, Cd, Cr analysis
5 day turnaround

Silver Valley Lab
1 Government Gulch
Kellogg, ID 83837
(208) 784-1258
Dave Slater

SAMPLE #: RF-DU-1

RESIDENCE: LITAN POWER & LIGHT QUINN'S JUNCTION

FACILITY

TIME: ~~1015~~¹⁰³⁰ RC 1039

PH: 7.0 (PH paper used)

CONDUCTIVITY: 1300 μ hos

TEMPERATURE: 5°C

SAMPLE APPEARANCE: Taken from free hydant.

Clear no fumes or sediment. Dugout water for 10 minutes

PARAMETER	SAMPLE NO.	TEST NO.	TEST NO.	TEST NO.	TEST NO.
METALS (PULSED)	8-20094	UNFIL (PUL)	0068043	8-1322 ¹⁴ 74	
METALS (UNPULSED)	8-20080	UNFIL	0065043	8-1322 ¹⁴ 74	
METALS (PULSED)	8-20081	FILTERED	0065043	8-1322 ¹⁴ 74	
METALS (UNPULSED)	8-20052	FILTERED	0065043	8-1322 ¹⁴ 74	

43

SAMPLE #: RF-DW-3

RESIDENCE:

NOT
TAKEN

TIME:

PH:

CONDUCTIVITY:

TEMPERATURE:

SAMPLE APPEARANCE:

PARAMETERS	SAMPLE TAG NO.	TESTED	DATE	CONC OF	W2001110
		TESTED		W2001110	
Metals (unpurged)	8-20087	UNFILTERED		8-13225 th	
Metals (purged)	8-20088	UNFILTERED		8-13225 th	
Metals (unpurged)	8-20089	FILTERED		8-13226 th	
Metals (purged)	8-20090	FILTERED		8-13226 th	

SAMPLE #: RF-DW-4 (TRIPPLICATE)

RESIDENCE: MONROE 355-9699 Lat 4.19 LT.

NO purged samples collected at this location because there was no way to bypass water going into an already full holding tank.

TIME: 1224

PH: 7.0

CONDUCTIVITY: 650 μ hos.

TEMPERATURE: 10°C

SAMPLE APPEARANCE:

PARAMETERS	CONTAINER NO.	TREATMENT	DATE	SPAN OF ANALYSIS NO.	ANALYST NO.
METALS (UNPURGED)	8-20091 ✓	UNFILTERED ✓		8-13229 ^{RL}	
METALS (PURGED) X	8-20092	UNFILTERED		8-13225	
METALS (UNPURGED)	8-20093 ✓	FILTERED ✓		8-13226 ^{RL}	
METALS (PURGED) X	8-20094	FILTERED		8-13226	
METALS (UNPURGED)	8-20095 ✓	UNFILTERED ✓		8-13229 ^{RL}	
METALS (UNPURGED)	8-20096 ✓	UNFILTERED ✓		8-13229 ^{RL}	

SAMPLE # : RF-DW-5 (DUPLICATE OF RF-DW-2)
 RESIDENCE:

TIME: 1300

PH: *due to* RF-DW-2

CONDUCTIVITY:

TEMPERATURE:

SAMPLE APPEARANCE:

PARAMETERS	DATE	TIME	LOCATION	ANALYST	REMARKS
TESTS (UNPURRED)	8-13978	✓	UNFILTERED		8-13228 ²⁸⁰
TESTS (PURRED)	8-13979	✓	UNFILTERED		8-13228 ²⁸⁰
TESTS (UNPURRED)	8-13980	✓	FILTERED		8-13228 ²⁸⁰
TESTS (PURRED)	8-13981	✓	FILTERED		8-13228 ²⁸⁰

CHAIN OF CUSTODY RECORD

REGION VIII, ONE DENVER PLACE
999 18TH STREET
DENVER, CO. 80202-2413

PROJ. NO.		PROJECT NAME				NO. OF CON- TAINERS	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">1 LITEL KULT</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">2 LITEL TAG #</div> <div>REMARKS</div> </div>									
SAMPLERS: (Signature)																
STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION											
KF-DW-1	02/07/91	1039		✓		4										8-20079, 8-20080, 8-20081, 8-20082
KF-DW-2	02/07/91	1200		✓		3										8-20083, 8-20084, 8-20086
KF-DW-4	02/07/91	1224		✓		4										8-20091, 8-20093, 8-20095, 8-20096 UP, UP UP, UP UP, UP (UP NE)
KF-DW-5	02/07/91	1300		✓		4										8-18978, 8-18979, 8-18980, 8-18981 UP, UP UP, P UP, P P P
KF-BE-1	02/07/91	1420		✓		1										8-20087
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Relinquished by: (Signature)		Date/Time		Received by: (Signature)						
Robert L. Paddy		03/07/91 1730		FED EX												
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Relinquished by: (Signature)		Date/Time		Received by: (Signature)						
Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature)		Date/Time		Remarks								

Distribution: Original Accompanies Shipment; First Copy to Coordinator Field Files; Second Copy to Representative of Inspected Facility

Split Samples:
☐ Accepted ☐ Declined _____ Signature